Direct Testimony of Fall River Police Chief John M. Souza

Q. Please state your name, current position and business address.

A. John M. Souza, Chief of Police of the Fall River Police Department, 685 Pleasant Street, Fall River, Massachusetts.

Q. For how long have you been involved in the area of law enforcement?

A. I have been in law enforcement for twenty-five (25) years.

Q. Do your responsibilities include directing the evacuation of areas during times of emergence?

A. Part of my responsibilities would indeed include directing the evacuation of areas during times of emergence.

Q. What is your educational background?

A. I have a B.S. in Criminal Justice from Bryant University in Smithfield RI (1979) and a Juris Doctor from the New England School of Law in Boston, MA (1995).

Q. What is the purpose of your testimony in this proceeding?

A. When Mayor Lambert became aware of the proposal of the Hess Oil Company to locate a major LNG terminal at the Weaver's Cove site within the City of Fall River, he asked that I familiarize myself with a number of concerns that he had. He was concerned first about the need that would exist to protect the terminal

facility and LNG tanker traffic in Mount Hope Bay and the Taunton River against the possibility of intentional attack. It should come as no surprise that the Mayor and those of us who share his responsibility for the protection of the safety of our City and of its residents have found it necessary to increase our vigilance since the events of 9/11. The Mayor wanted assurances that we would be able to protect the facility and the ships from a terrorist attack. Second, the Mayor asked me to consider whether we would have the ability to evacuate the local population that could be placed in danger in the event that there was a successful terrorist attack, or in the event that there simply was an accidental spill from either the facility or from a tanker.

Q. Chief Souza, before you tell us the conclusions that you have reached and wish to share with the Commission, please indicate whether you consider yourself an expert on how leaks might occur at an LNG terminal or tanker, on the fires that could result, or on the vapor cloud that could be released?

A. I would not consider myself an expert but I can tell you that over the course of the past year I have become quite knowledgeable about each of those subjects both from my reading and from consulting with those who are expert and who have had to live with the possibility of LNG releases and fires on a daily basis. As a consequence I now consider myself to be knowledgeable about each of those subjects. But for purposes of discharging the assignments that were given to me

by Mayor Lambert, I relied upon the advice that I received from the experts, principally from Dr. Havens and Dr. West.

Q. Would it be fair to say that Dr. Havens and Dr. West identified the problems that could occur, their geographic reach and their intensity, and that you then focused on the issues associated with protecting the facility and tankers from intentional attack and emergency response requirements following either an attack or an accident?

A. That is correct.

Q. Tell us then what it is that you assumed, based on the advice that you had received from Dr. Havens and Dr. West.

A. I assumed the possibility of a release of LNG in both liquid and vapor form from either an intentional or an accidental breach of a portion of an LNG tanker or from such a breach at the onshore terminal. I further assumed that a tanker breach could occur accidentally as a result of a navigational error, for example, a collision at one of the two bridges that the tankers would have to pass under while in Massachusetts's waters, or possibly as a result of a collision with another vessel, which could, I should add, be an intentional act, as the USS Cole incident makes clear. Also, that either a tanker or the terminal could be attacked by a land or water based terrorist, perhaps armed with a rocket propelled grenade or RPG. I also assumed certain consequences following such an accident or intentional attack. For example, I was advised by Dr. Havens and by Dr. West that a spill of

LNG could result in a "pool fire" of sufficient thermal intensity that persons within a mile of the fire could, within as little as thirty seconds, suffer second degree burns over any unprotected parts of their bodies. In addition, I was told that the heat intensity of the "pool fire" would be sufficient to ignite secondary fires that in turn would spread the area of conflagration. I was advised that, just to afford the population minimal protection from "pool fires" it would be necessary to evacuate an area extending one-mile in each direction from the edge of the fire. Obviously, to the extent that secondary fires resulted, the area of required evacuation could be even more extensive, depending on the nature and extent of any secondary fires.

Q. What were you told about the issue of vapor dispersion and what were you asked to assume?

A. Dr. Havens explained to us that following the release of LNG it must be anticipated that a vapor cloud would form and spread to an extent and in the direction dictated by the atmospheric conditions that are then prevailing. He told us that the vapor cloud would continue to present a threat to public safety as long as the cloud contained a methane concentration of between 5% and 15%. The danger is that a vapor cloud containing that concentration of methane will ignite if it comes into contact with a source of ignition. The danger would exist along a downwind path from the site of the release until the methane concentration within the cloud was reduced below that 5% level. I was told by Dr. Havens that a

recent government laboratory report indicates that a flammable vapor cloud could extend 2 miles downwind of a spill but that he thought that was a conservative estimate and that from a public safety standpoint I would be better advised to assume that the area of evacuation would extend for as much as 3 miles. For purpose of my evaluation I assumed that a 2 mile evacuation zone would be essential but that a 3 mile zone would be preferable.

Q. Chief Souza, please summarize the conclusions that you have reached based upon your evaluation?

A. As one of the officials of Fall River with principal responsibility for safeguarding the health and well being of our population, and for the protection of infrastructures that are so critical to the safety of that population, I am loathe to believe that any threat would be beyond our ability to cope. Since the consequences of an accidental or intentional spill have been made clear to me I have struggled to get comfortable with our ability to prevent intentional attacks and to deal with the aftermath of a spill. Regrettably, I have been forced to reach the conclusion that we lack the ability to eliminate a significant possibility of intentional breach and we cannot assure safe evacuation in the event of a breach. I see no way of protecting as many as 10,000 or more members of our local population from the life-threatening burns that Drs. Havens and West indicate could be associated with an LNG fire.

Q. Please explain first your conclusion that it would not be possible to eliminate or even to reduce to an acceptable level the risk of a breach of LNG tanker or terminal containment from intentional attack.

A. I will, but first I must take issue with the notion that any level of residual risk would be acceptable. Where the consequences of a successful attack are so dire, where the resulting devastation and human toll would be so high, I cannot accept the notion that even a small risk is tolerable, certainly not unless it were demonstrated that there were absolutely no safer ways in which to meet a public need. Frankly, that was my greatest source of frustration in working with the team that was supposed to develop security plans. The representatives from Weaver's Cove and, sadly, even federal officials, were willing to assume that it is satisfactory simply to minimize the risk, even if substantial vulnerability with the potential for the most dire consequences to public safety and to human health remain. I could not endorse that acceptance. But to answer your question directly, I frankly cannot get comfortable with the notion that the risk of intentional attack could ever be reduced to the point where the likelihood of occurrence could be considered to be minimal. In saying this I can anticipate that others would consider it unlikely that Fall River, Massachusetts would be high on the list of any terrorist. I would like to think that to be true today. But I challenge any one to dispute that with the location of the Weaver's Cove terminal, and with the tanker transport up and down Mount Hope Bay and the Taunton River, that would continue to be the case. I would venture to guess that, with the possible

exception of the Everett terminal, there is no existing LNG terminal operating anywhere in the United States where the population around the facility is as dense as it would be in Fall River. And I am confident that there is no tanker route that passes through waterways that are as congested, and where the tankers come in as close proximity to population centers, as would be the case with the Weaver's Cove proposal. So while Fall River may not be a priority target for terrorists today, it would be irresponsible to assume that the target of opportunity presented by the Weaver's Cove proposal would go unnoticed. I note that Richard Clarke shares this view.

Q. If we accept your conclusion that there would be a heightened risk of terrorist attack both at the terminal site and along the tanker route, and that the possibility of such an attack can never be eliminated, what would be required to reduce the probability of a successful attack as much as is possible?

A. It would require the constant deployment of far more resources than we can hope to muster. I have to give you some background. The City of Fall River, under the leadership of Mayor Lambert, is struggling to emerge out of a prolonged period of economic despair. I will leave to others the articulation of our recovery plan and how it would be impacted if the Weaver's Cove proposal were allowed to go forward. The point that I want to make is that our population already is shouldering as much of a financial burden as is tolerable. The resources available to my Department, and to the Fire Department as well, already are struggling to

meet daily responsibilities without any cushion to spare. Yet the presence of the Weaver's Cove terminal in our midst would dwarf any need that now confronts us.

Q. What do you mean by suggesting that the presence of Weaver's Cove would present an incomparable challenge?

A. Along the proposed transit route of a vessel into the Weaver's Cove site there are numerous choke points formed by narrow waterways and straits, including bridges. In addition, there are several marinas, a state pier, and the shoreline is densely populated with homes, condos, businesses, an oil storage facility and a future middle school. There are many areas along the shoreline that are accessible to the general public, which would pose a great threat to the safe transit of a vessel up the Taunton River. The transit of LNG up the Taunton River has the potential, if attacked, to result in catastrophic loss of life and/or catastrophic economic loss to the City of Fall River and the surrounding region.

With this in mind, it is my opinion that in order to provide adequate security for the safe transit of LNG along the proposed route, a complete evacuation of the 500-yard zone along the path of the LNG tanker route would have to be conducted for both the inbound and outbound operations. As I understand it, a RPG is accurate within a distance of roughly 500 yards, and in my judgment a total evacuation of the area from which a RPG can be accurately fired is necessary in order to minimize prevention of an attack.

Q. You believe that the only way to minimize the possibility of a terrorist attack on an LNG carrier close to heavily populated areas within Fall River is to evacuate all areas of the City that fall within 500 yards of the route of the LNG carriers to the Weaver's Cove terminal?

A. Yes.

Q. In your judgment, would it be feasible to evacuate such areas each time an LNG carrier comes or goes?

A. No. There is no question in my mind that such an evacuation would not be feasible. Because of the extensive areas within Fall River that fall within such a 500 yard zone, evacuation of the homes, businesses, health facilities, and schools, would not be possible.

Q. Do you have any estimate of the number of homes and other buildings that would be included within such a zone?

A. Including the buildings that would be within a radius of 1000 yards from an LNG carrier moored at the terminal, the Fall River side of the zone that I believe would need to be evacuated in order to provide adequate security contains approximately 675 homes and apartments, 77 businesses (including a kidney treatment center), and a proposed middle school planned for 800 students. In addition, this zone includes several of the major roads serving Fall River, including Route 79, Brightman Street (including the Brightman Street Bridge), and North Main Street.

Q. Why are you including the area within a radius of 1000 yards around an LNG carrier moored at the terminal?

A. I am including that area for several reasons. First, I believe including that area is in fact required by regulations issued by the Coast Guard, 33 CFR § 165.121. That regulation, promulgated in 2002, designates as both safety and security zones the area (including land) within a 1000 yard radius of any "high interest vessel" moored at a waterfront facility in Providence Captain of the Port zone, and Fall River is within that zone. Moreover, the regulation goes on to define a "high interest vessel" to include ships carrying LNG. Section 165.23 provides that "no person may remain in a safety zone or allow any vehicle ... or object to remain in a safety zone unless authorized by" the Captain of the Port; and § 165.33 includes a similar requirement with respect to security zones. While these prohibitions may be waived by the Captain of the Port or other designated Coast Guard officials, the idea of a blanket waiver to anyone and everyone would totally defeat the purpose of the regulation. And that purpose is to ensure security, and to ensure safety.

Second, I believe that to truly ensure security, 500 yards is simply not enough of a buffer. Indeed, since RPGs are generally accurate within 500 yards, that distance provides no buffer at all. Unless we could station a policeman every 5 or 10 yards around the 500-yard radius, we would need a substantially bigger evacuation zone to ensure that no one intent on doing grievous injury to the people of Fall River,

and to the United States, was able to get close enough to the LNG carrier or terminal.

Q. You concede, though, that even an evacuation of the area within 500 yards of the LNG carrier route is not feasible.

A. Yes, that is correct. Such an evacuation, on a regular and routine basis, is not possible.

Q. What are the implications of the infeasibility of such an evacuation?

A. I believe that the implications are clear – that the Commission should recognize that it is impossible to provide adequate security for the Weaver's Cove terminal, given the location of that proposed terminal, and given the narrow passages that the LNG carriers supplying that terminal would have to traverse.

Q. You appear to assume that protection of the tankers from terrorist attack would require on-shore surveillance. Isn't this inconsistent with the premise that was adopted by the security planning group?

A. It is. At the planning sessions that I attended the operating premise was that surveillance of the shoreline could be accomplished by positioning security personnel on ships that would escort the tankers. As I expressed during those sessions, it is not possible to prevent shore-based attacks through on-water surveillance activities even if it were assumed that upon spotting suspicious activity shore-based security units would be notified. First, assuming that threats

could be spotted from the water, which I, based on my detailed familiarity with the area, would consider to be highly unlikely due to the topography and level of development in certain areas, the probability of having sufficient time to notify and reposition land-based forces in time to thwart an attack is close to zero. More importantly, it is highly improbable that water-based surveillance would succeed in locating land-based threats. Throughout the length of the more than five-mile tanker route in Massachusetts there are too many available man-made and natural buffer zones that would readily accommodate a terrorist intent on alluding surveillance. The problem is magnified along the Rhode Island portion of the route. At most, on-water surveillance may help to identify the area from which an *attack already has been launched, not to prevent it.*

Q. What areas of the shoreline would you consider to have the potential as serving as the site from which an attack could be launched?

A. Considering the range of the weapons likely to be available even to the most untutored terrorist, it would certainly be necessary to include as "high risk" any area that would allow a terrorist to be positioned within 500 yards of the tanker route. In the security planning sessions we referred to these as "pinch points." I have reviewed what that implies for the Massachusetts portion of the route and I can tell you that it covers a good portion of the contiguous shoreline. The on-shore demographics along the proposed transit route of a vessel into the Weaver's Cove site contain a number of characteristics of "pinch" or "choke" points. The

Taunton River is a narrow waterway with several bridges, several marinas, and a state pier. The shoreline is densely populated with homes, condominium units, businesses, an oil storage facility, and it is soon to be the site for a planned middle school. Accessibility of the public to areas reasonably contiguous to the shoreline exists throughout much of the tanker route. Based on my analysis I was forced to the conclusion that it would be untenable to secure an area that substantial. Again, in Rhode Island, a far larger area would be within the "high risk" definition.

Q. What course of action would you feel necessary in those areas?

A. At the risk of appearing flippant, which I certainly do not intend, the only way of even hoping to reduce the risk to the minimum level possible, while still not eliminating it, is to evacuate the entire "high risk" area contiguous to a moving or berthed tanker.

Q. Surely you recognize that would not be possible.

A. I do. Remember, that would include the area around the terminal whenever and for however long a tanker is berthed. But the fact that it cannot be done does not mean that it shouldn't be done if the risk of attack is to be minimized. Consider the requirements imposed by the Coast Guard post-9/11 for the purpose of minimizing attacks on LNG tankers. That requirement dictates a minimum of a 1000 yard exclusion zone around LNG tanker traffic *in these very waters.* 33 CFR 165.121. While the local commander is authorized to issue ad hoc waivers if

warranted by the circumstances, the regulation sets out the general rule that was thought necessary. Moreover, the waiver possibility is to permit the passage of vessels that confidently can be assumed not to present a terrorist threat. The existence of the minimum 1000 foot exclusion requirement only serves to underscore the necessity for a similar requirement on land without the possibility of waivers except perhaps for limited land areas that are well fortified and inaccessible to the general public, and such areas do not exist along our shoreline. First, if water-based attacks are to be discouraged, it must be assumed that terrorists would favor land-based opportunities. Second, water-based attacks, by their very nature, are more complicated, as the assessment of Richard Clarke makes clear. Land-based attacks need not be as rushed and the vagaries of changing water conditions is eliminated as a complication. The fact that comparable land-based security precautions would not be possible only serves to underscore the irrationality of the location proposed for the Weaver's Cove project.

Q. *Now please describe the difficulties that you would confront in the event of a spill, whether as the result of an accident or as the result of an intentional act.*

A. Let me start by first addressing the complexities of evacuation in the event of a "pool fire" and begin with the terminal location. To assist the Commission's understanding of those complexities it is important that I first describe for you both the population that would be within the area of heightened concern, and the

difficulties associated with the available evacuation routes. Approximately 9,000 residents live within a mile of the proposed terminal location with the closest residence only 1200 feet away. I have attached to this testimony as Exhibit A, a map of the terminal and the surrounding area. A new middle school with approximately 800 students is planned for the area. There is a Kidney Center within the area, a large number of business establishments, and a high rise apartment complex containing 82 units occupied by elderly and disabled residents. Moreover, as should be clear from the attachment, the area that houses a majority of the population that would be most affected has extremely limited "escape" routes available to it and what is most critical is that for a large segment of that population in order to gain access to an exit route it first would be necessary to head *into the area of paramount danger*. Many of the side streets are dead ends, requiring egress to be in the direction of the likely area of conflagration. To imagine that persons living in those areas and seeking to expedite their evacuation would then have available to them adequate protective gear, or if they did have such gear that they would locate it and put it on in less than 30 seconds, is foolhardy. Imagine the sheer terror that would then confront a mother as she struggled to round up her children, and cloak them with protective gear, *all in 30 seconds*. How would the elderly or the infirm cope? Even if it were assumed that it would be possible to supply every local resident with protective gear, are they to carry it with them as they carry on their daily lives within the zone of maximum danger? And what is to become of the transients?

Are they to be issued protective gear as they enter the zone? The very idea that the permanent and the transient population can be given any modicum of assurance that they will be safe, *when life-threatening danger is but 30 seconds away,* is ludicrous.

Now consider the difficulties that would be confronted along the approximately 5 mile tanker transit zone that lies within Massachusetts. The one-mile minimal evacuation zone, with the associated 30-minute limitation, would extend along that entire route. As a result, thousands of additional people would now find themselves to be residents of the zone of heightened danger with countless thousands of transitions in attendance at any point in time. Even if it were assumed that we could provide protective equipment for the permanent residents around the terminal, are we to do that for the population along the route? And must everyone traveling that route, whether a resident or not, always have at their fingertips protective gear? Even assuming that we could conduct regular evacuation drills for residents contiguous to the terminal, are we to do that for everyone who may at some point find him or herself traversing the shoreline? How do we do that? How do we even get there in time to facilitate the evacuation that must be completed within 30 seconds?

Finally, there is the added complications that would be associated with the secondary fires that could be ignited as the LNG fire comes into contact with other flammable sources.

I did not mean to pose what simply would be assumed to be a series of rhetorical questions. They are the questions that have caused the Mayor, my associates and me to bear countless sleepless hours since we became aware of the Weaver's Cove proposal and since we began to appreciate the threat that it presents to our citizenry.

Q. Chief Souza, thus far you have addressed your concerns associated with "pool fires". Do you have concerns about the potential for the release of vapor clouds following a breach of containment?

A. I most certainly do. Everything that I already have said about "pool fires" can apply as well in the case of a release that results in the dispersion of a vapor cloud. The ultimate danger is that the cloud will ignite. The problem is that we do not know where ignition might take place. It can occur anywhere along the downwind path of the cloud up until the point where the methane concentration is dissipated below the level that would support ignition. Remember that there is agreement that the extent of that danger zone, according to government experts, is at least 2 miles and according to Dr. Havens may well be as much as 3 miles from the point of the initial spill.

Q. What are the implications, from a public safety standpoint, of the possibility of a vapor cloud extending for 2 or even 3 miles?

A. If you could tell me the size of the initial release, the direction and the intensity of wind flows at the time of that release, and where the cloud might first come into

contact with a source of ignition then, but only then, could I even begin to anticipate the population that could be adversely affected and the difficulties that would be associated with safe evacuation. But of course neither you nor anyone else can provide me with that critical information, either for a spill at the site of the terminal or for one along the tanker route. The most severely affected population might, if we are exceedingly fortunate, be limited to hundreds, but it just as easily could reach tens of thousands. How do you plan for evacuation when the location of the occurrence is subject to such uncertainty? How do you marshal and get adequate evacuation people at the required location when that location cannot be identified in advance and when the escape window shuts in 30 seconds? It simply cannot be done, even if we had available to us endless financial resources, and that is one thing that Fall River surely lacks.

Q. Chief Souza, you made reference to the need for protective gear as a defense against second degree burns. Can you describe what type of gear would be required, at a minimum?

A. I would defer to the expertise of the professionals in the fire service to recommend what protective gear would be necessary by first responders to assure that they are protected and thus able to facilitate the safe evacuation of others.

Q. Chief Souza, do you have any concluding thoughts that you would like to share with the Commission?

A. I do. Those of us who have public safety as our daily responsibility do not often have the opportunity to take preventative action that in and of itself would eliminate a substantial threat to that safety. The Commission is being presented that opportunity. In a sense, I envy the opportunity that rests with the Commission. It alone has the power to take effective action. I pray that it avails itself of that opportunity. If it fails to, and if it instead permits the Weaver's Cove proposal to go forward, I can tell you, with one hundred percent confidence, that it will not be possible to protect a vast segment of the Fall River area, and a vast population in Rhode Island as well, from the horrors of an attack or from the consequences either of an attack or of an accident. Thousands upon thousands of lives will daily be in peril. I and my fellow officers will do our best to provide protection, but if you approve this project you would be disregarding my best professional judgment as a public safety officer, and you would be setting the stage for a catastrophic loss to the people of Fall River, and indeed to every American. The lives of my neighbors will have been changed irreparably.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Weaver's Cove Energy, L.L.C. and	)	Docket Nos. CP04-36-000, CP04-41-000,
	)	
Mill River Pipeline, L.L. C.	)	CP04-42-000, and CP04-43-000
	)	

DECLARATION OF WITNESS

I, John M. Souza declare under penalty of perjury that the statements contained in the Prepared Direct Testimony of John M. Souza on behalf of the City of Fall River and the Attorney General of the Commonwealth of Massachusetts in this proceeding are true and correct to the best of my knowledge, information, and belief.

Executed on this 7th day of June, 2005.

John M. Souza
Chief of Police
City of Fall River, Massachusetts

Exhibit ____